FROM THE STREETS TO THE SEA

A TEEN ACTION PROGRAM OF GENERATION EARTH

GENERATION EARTH

WHO WE ARE

GENERATION EARTH was created for the Los Angeles County Department of Public Works by TreePeople to take advantage of two compelling concepts. First, that youth are powerful agents of change in their families and among their friends, and second, that routine choices made by individuals on a daily basis have a collective environmental impact.

The Department of Public Works believes that the rewarding experience of taking action and making a positive change will inspire youth to take responsibility for their lives and, in turn, their communities.

From the Streets to the Sea is an environmental action program designed to provide youth and group leaders the information they need to not only learn about the issue of urban runoff, but also to provide tools to explore what is happening in their immediate environment, the link of technology to urban runoff, careers in the environment, and finally, ideas for taking action.

Sidewalk to the Sea is one in a series of teen action guides that cover a variety of topics about environmental issues in Los Angeles County. For more information on other Teen Action Program guides, visit www.generationearth.com.

THE ISSUE OF URBAN RUNOFF IN LOS ANGELES COUNTY

In Los Angeles, we receive water from four sources. Fifteen percent of our potable water (drinking water) comes from ground water. The remaining eighty-five percent of our potable water is imported through aqueducts (pipes and channels that transport water from a remote source using gravity) from the Sacramento River, the Eastern Sierras, and the Colorado River. After being filtered, this water is piped into our homes, schools and businesses for use in kitchens and bathrooms.

Once this "indoor water" is used, the underground sanitary sewer system carries wastewater from homes and businesses to treatment plants such as the Hyperion Wastewater Treatment Plant. Here, the wastewater is cleaned, solids and pollutants are removed, and the treated water is discharged into the ocean, five miles from the shoreline.

"Outdoor water" or urban runoff consists of water from garden hoses, sprinklers, car washing activities, etc. Along with rainwater, this water travels over concrete and asphalt, picking up pollutants (cigarette butts, automotive fluids, trash, pesticides, and pet waste) and carrying them into gutters that channel it into catch basins and the storm drain system. The storm drain system, which is separate from the sanitary sewer system, carries urban runoff into flood control channels, rivers and the ocean. Urban runoff receives no treatment before it is discharged into the ocean, endangering ocean swimmers, polluting coastal ecosystems, and killing marine life.

THE TEEN ACTION PROGRAM

As part of Generation Earth, the Teen Action Program is designed to assist teens, youth groups, and youth group leaders in providing a program that teaches about a specific environmental issue through engaging activities, moving groups to action. By registering, completing a minimum of four activities, and turning in a simple report, teen participants will receive a choice of a patch or "earth-tag" as recognition of their efforts, as well as a Certificate of Completion.

HOW TO USE THIS GUIDE

1 register

By registering you will have a Generation Earth staff person assigned to work with your group. Generation Earth is available as support to meet with you, help with resources, and more. **TO REGISTER, EITHER CALL 818-623-4856, OR SEND AN EMAIL TO GENERATIONEARTH@TREEPEOPLE.ORG**

2 plan your program

Plan which activities you will complete. To earn a patch or earth-tag, you must complete at least one activity in each category. Activities are organized under the following categories:

EXPLORE THE ISSUE – these activities help teach about the issue.

TECHNOLOGY LINK – these activities link the issue to technology.

CAREER PATH – these activities explore career paths associated with the environment.

SERVICE PROJECT – these ideas are given to help you organize a project in your community relating to urban runoff.

3 use the resources

This guide provides a majority of the resources needed to complete the activities listed. Worksheets, websites, and more can be found starting on page 23.

4 complete the activities

Have fun! There is a lot to explore, learn, and do regarding urban runoff in Los Angeles County.

5 fill out the final report

At the back of this guide is the Final Report. Fill it out and either mail or FAX it to receive your patches or earth-tags and Certificates of Completion.

6 receive your patch or earth-tag

Once we receive and process your report, we will deliver or send your recognition.

REQUIREMENTS

CONDUCT AT LEAST ONE ACTIVITY IN EACH CATEGORY

explore the issue

1. When water flows over hard surfaces it picks up whatever is left on the ground including pollutants (cigarette butts, automotive fluids, trash, and pet waste), carrying them into gutters that channel them into the storm drain system that leads to the ocean. Conduct a water flow scavenger hunt at your home, school, or group meeting place. Map where water comes from, where it goes, and any pollution left on the ground. Determine the trouble spots and what could affect the quality of water that flows across the site. Create a list of ideas for improving the area where water flows. See page 6 for a sample scavenger hunt.

2. Using a map of Los Angeles County, find and list the names of the various creeks, rivers, flood basins, washes and channels. Identify the waterway closest to your site. Chart the path that water would take from your site, into the closest waterway, through Los Angeles, and to the ocean. Where do trash and other pollutants left on the ground end up? How does your site affect water that goes into the water system? What ideas do you have to help keep pollutants out of the water that flows to the ocean? Go to www.ladpw.org/wmd/watershed/LA/ for a sample map showing Los Angeles County waterways.

3. Create a diagram showing the cycle that water takes from the ocean to clouds, clouds to rain, rain to streams, streams to rivers, and rivers to the ocean. Create another diagram showing how the cycle works in a city environment from ocean to clouds, clouds to rain, rain to city street, street to gutter, gutter to catch basin, catch basin to storm drain, storm drain to river, river to the ocean. Include where your site is located in the urban cycle. See page 8 for sample diagrams and additional resources.

4. Play the *Check This Out* game to learn about the link of waste to urban runoff and issues of water quality in Los Angeles. See page 11 for game details and materials.

5. Conduct a Beach Clean-up Survey at a local beach. Pick up trash while taking a survey to determine what percentage of the trash can be recycled and what is actually "trash." Determine which items were trashed the most, and give ideas for preventing the "highly trashed" items from making their way to the ocean. See page 10 for a beach clean-up survey.

6. Find out the history of the Clean Water Act. When was it passed, its focus, and what agency regulates the law in California? See page 21 for information.

link to technology

1. Currently in Los Angeles County, new technologies are being used to help direct rain water from streets and into areas where it can be cleaned and stored for use, or allowed to seep into the earth to replenish ground water supplies. These techniques are called storm water Best Management Practices, or BMPs. Learn about and view a variety of BMPs that are being used in different U.S. cities by visiting www.lid-stormwater.net/intro/homedesign.htm. In the lower right corner, select a technique and hit "Go." Which of these BMPs would you like to see used in Los Angeles? Draw an area of your site and create a design to show where one of these BMPs could be used.

2. Visit the Heal the Bay web site at www.healthebay.org/brc/grademap.asp?map=3 for a report card on coastal water quality in California. The report grades local beaches on an A - F scale based on daily and weekly water quality monitoring data collected by various County and City public agencies throughout Southern California. What does the report card measure? What is the grade for the beach closest to where you live?

3. Find out how scientists use space-based SAR imagery – synthetic aperture radar – to detect and assess marine pollution in southern California coastal waters. Visit http://seis.natsci.csulb.edu/bperry/scbweb/pollution.htm or www.jpl.nasa.gov/news/news.cfm?release=2005-048 for information. What are the benefits of using this system?

4. Visit the County of Los Angeles Department of Public Works web site at www.ladpw.org. Find out what environmental services they are responsible for. Go to their Stormwater Pollution Prevention site at www.ladpw.org/prg/stormwater/ and take the Polluter Behavior Quiz (located in the red bar on the left).

5. Electronic discards (E-Waste) are one of the growing causes of water quality issues in Los Angeles. E-Waste is the informal name for electronic products that can no longer be used. Computers, televisions, stereos, and telephones can all become "E-waste." Many of these products can be reused, refurbished, or recycled. As of February 6, 2006, it became illegal to dispose of batteries, fluorescent lamps, and electronic devices in the trash. Either go to www.888CleanLA.com on your computer or call 888-CleanLA to find out the best way to dispose of E-waste, and where in your community to do it.

career path

1. Conduct computer research on a career related to water resources and protection. Examples include: water quality technician, environmental technician, water biologist, and storm water management engineer. Write out the job description and, if possible, the qualifications and salary range.

2. Set up a visit to the Career Center at your local college to inquire about classes and careers in the environmental field. A list of questions to ask is located on page 22. Check to see if the college will be holding an Environmental Career Fair that you can attend. Career Fairs invite companies in the environmental field to have a booth and talk with students about possible job opportunities.

3. Environmental and natural resources law is one of the most rapidly growing fields in the legal profession. There are a vast number of state, federal, and international laws seeking to control environmental pollution and protect resources. Research a college/university that provides a degree in Environmental Law. Provide information to others on where it is located, and a list of the courses they provide.

4. Invite a speaker, or panel of speakers, representing careers related to water resources or the environment to discuss career options in this field. Resources for speakers may include family members, friends and colleagues of parents, or local businesses and agencies. Prepare a list of questions ahead of time. A list of sample questions is located on page 22.

REQUIREMENTS CONTINUED ON NEXT PAGE

REQUIREMENTS (CONT)

service project

1. Create a "water" tour of your school or group meeting area. Include where water comes from and where it travels. Point out the areas where water can pick up trash and other harmful substances and carry them into drains, gutters, and the street. Show on a map where water goes when it leaves the site and the path it takes to the ocean. Point out any actions that were taken to keep water from leaving the site, such as the planting of gardens and trees, or a recycling/trash program. Document the tour on a flyer, brochure, or podcast and invite others to take the tour.

2. Work with an agency or organization to adopt a local stream, river or other body of water. Clean up a portion and help maintain it. Figure out where the main sources of trash and pollution originate from and come up with ideas to help reduce the problem. A list of resources is located on page 23.

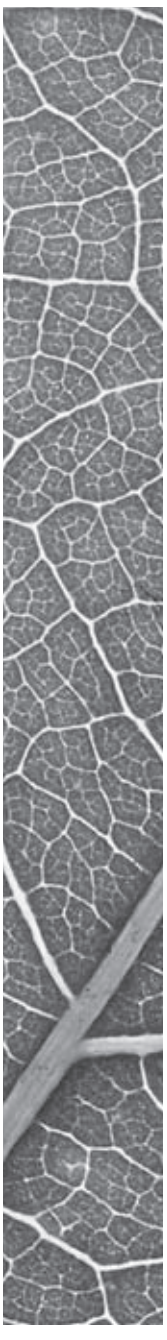
3. Reduce the water runoff from pavement by redirecting it into a "rain garden." A rain garden is a garden that uses native plants and grasses in areas of storm water runoff – beside parking lots, driveways, down spouts; or in areas that flood after rain. See page 23 for a list of web sites for ideas.

4. Teach children about the importance of keeping litter and other harmful items off the ground to help prevent polluted storm water runoff. Put on a puppet show, skit or other presentation that teaches what they can do. Figure out a way to involve your audience in the process. Invite local officials to your presentation. See page 24 for a sample idea and advice for working with children.

5. Come up with your own service project idea. Assess the needs of your school, group meeting place, or community to best determine what you can do to help the issue of storm water runoff in the area. Create a plan then make it happen! See page 27 for an Idea Mapping activity to help get you started.

RESOURCES

WATER FLOW SCAVENGER HUNT



Name(s) _____ Date _____

Location _____

1) Obtain a map of the site you are surveying. A simple, hand drawn map can be created on page 7 if a map is not available.

2) Use colored markers or pencils to mark the map and identify what is found.

3) Walk around the entire area looking for the items listed on the survey and marking their locations on the map.

WATER FLOW SCAVENGER HUNT
LOOK FOR...

☐ **PLACES** where water can get into the ground (grass, bare dirt, garden, etc.)
Use green to show these places on your map.

☐ **SOURCES** of water (faucet, drinking fountain, sprinkler, hose, etc.)
Use blue to show these places on your map.

☐ **PLACES** where water travels (gutters, down spout, drain, concrete, asphalt, etc.)
Use purple to show these places on your map.

☐ **TRASH** and other things that could be harmful to water (food trash, candy wrappers, motor oil, pet waste, etc.)
Use a red X to show these items on your map.

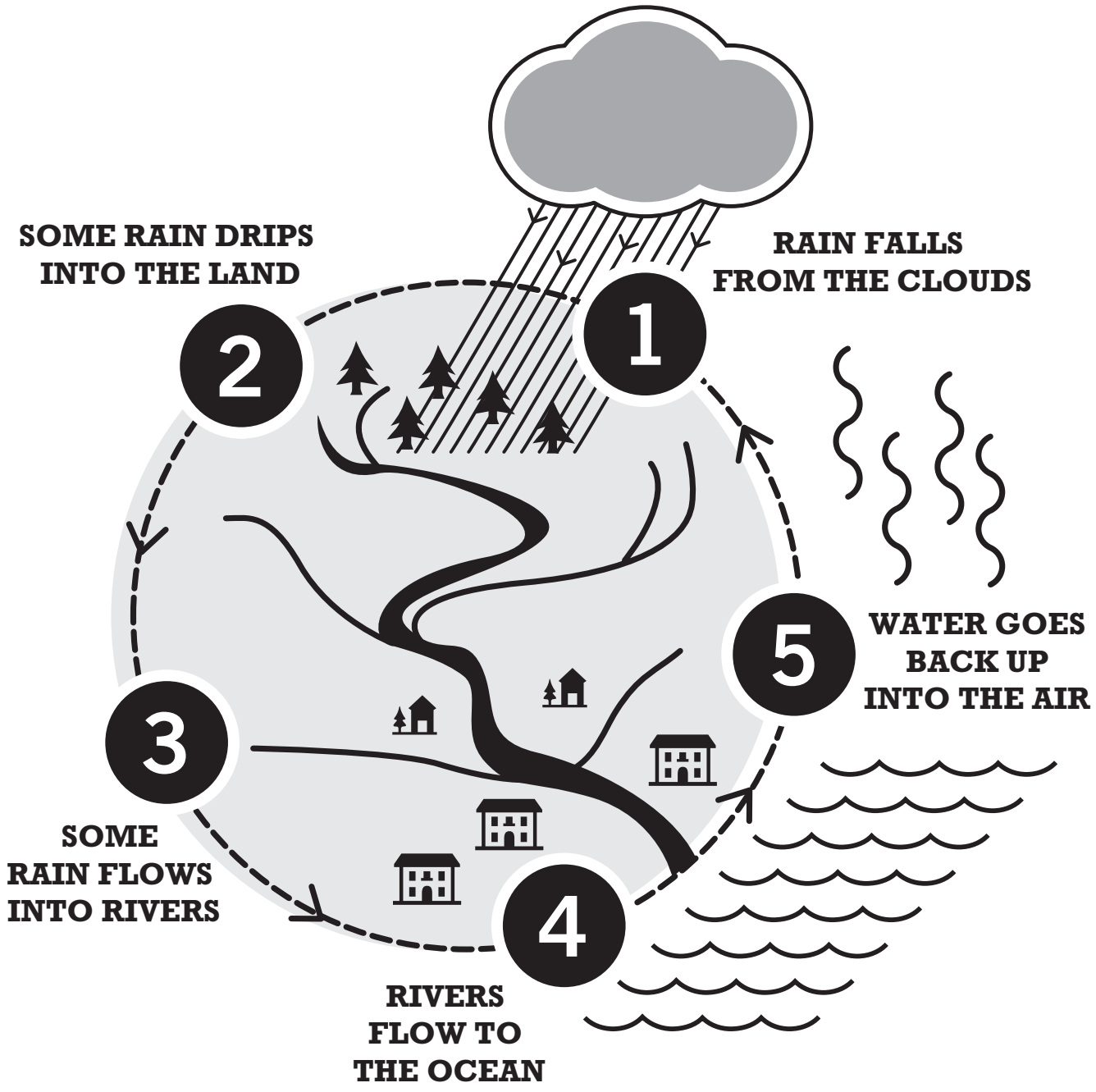
---

a) Circle on your map where you found trash and other harmful things.

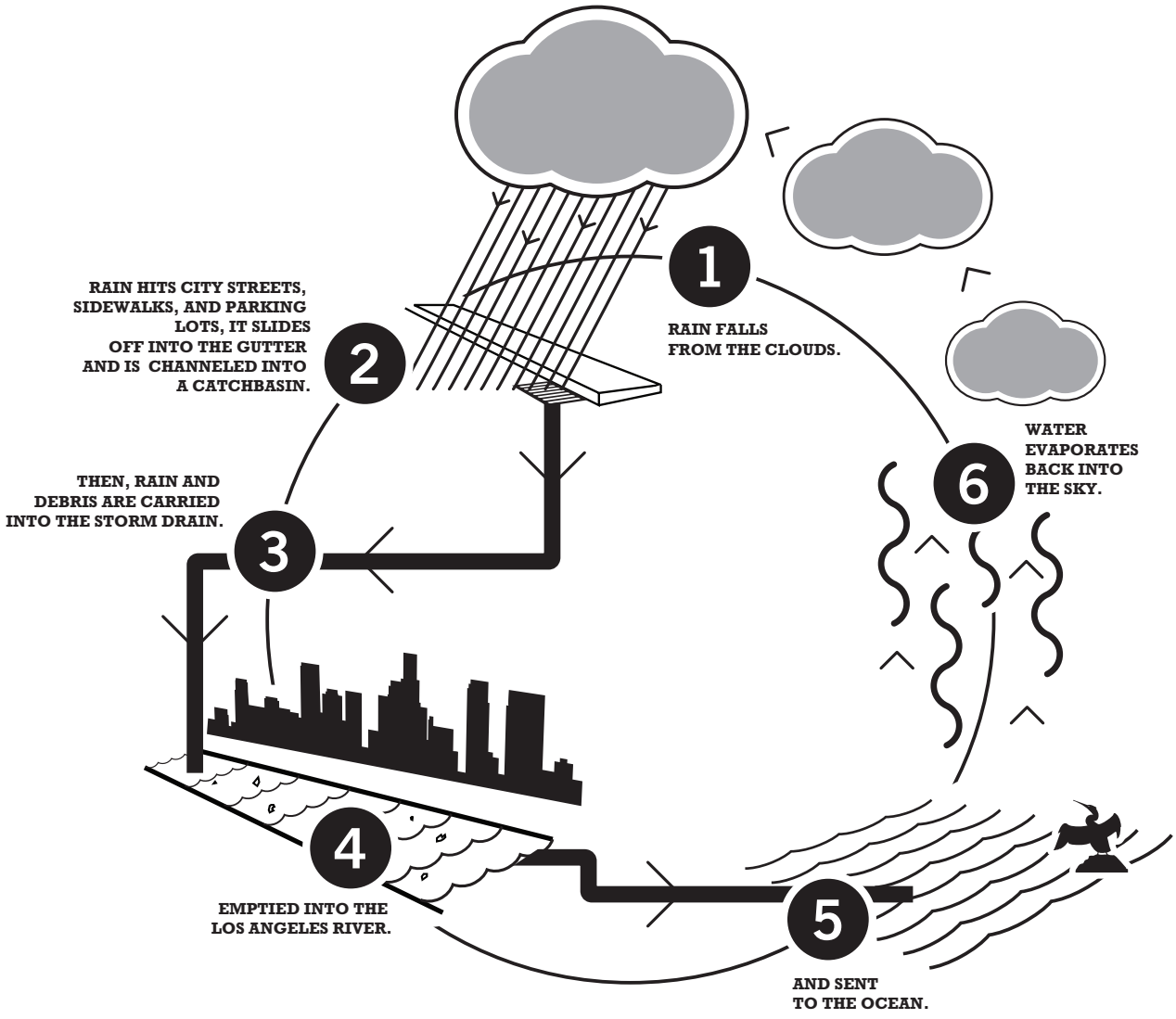
b) Create a list of ideas to improve these areas.

DRAW MAP HERE

NATURAL WATER CYCLE



URBAN WATER CYCLE



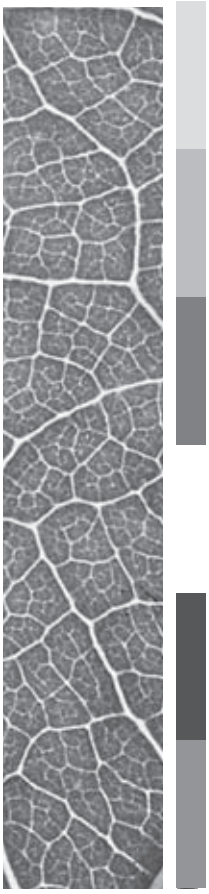
OTHER SOURCES OF DIAGRAMS CAN BE FOUND AT:

http://www.westbasin.com/watershed.html

http://www.mos.org/oceans/planet/cycle.html

http://gpm.gsfc.nasa.gov/outreach.html

BEACH CLEAN-UP
SURVEY



Name(s) _____ Date _____

Location _____

1) Wear gloves when collecting trash.

2) Survey what trash is found. Under the two columns labeled "trash" and "recyclables" keep a tally of how many of each item is found (i.e. "cigarette butts" under trash, and "bottles" under recyclables).

3) After the clean-up and survey is complete, answer the questions.

4) Dispose of the trash properly in a trashcan or dumpster.

TRASH

ITEMS FOUND	TALLY
CIGARETTE BUTTS	
FOOD PACKAGING	
STYROFOAM PRODUCTS	
PLASTIC BAGS AND STRAWS	
OTHER:	

RECYCLABLES

ITEMS FOUND	TALLY
GLASS BOTTLES/JARS	
METAL/ALUMINUM CANS	
PLASTIC BOTTLES	
PAPER PRODUCTS	
OTHER:	

a) From the items found, what percentage can be recycled (recyclables ÷ total amount X 100 = %)?

b) What percentage is actually "trash?"

c) Which items were trashed the most?

d) What ideas do you have for preventing the "highly trashed" items from making their way to the ocean?

CHECK THIS OUT GAME

TIME **60 MINUTES**

OVERVIEW

In working groups, participants explore one topic area related to urban runoff and hazardous waste that harm our water system. Groups are then split up forming new teams each with information about the 2 different topic areas. These new teams answer one question and illustrate it using poster paper or a dry erase board. Finally, groups present their posters.

materials

- ☐ *Topic Card* and the five related *Check This Out* cards – 1 topic per group
- ☐ Poster or dry erase boards – 1 per group
- ☐ Markers – 1 set per group

instructions

1. Divide into two working groups. Groups should be as close to equal in size as possible.

2. Each group does the following:

    a. Each group will learn and discuss a different topic of water pollution issues – storm water runoff or household hazardous wastes.

    b. Each group will receive one *Topic Card* and the five related *Check This Out* cards.

    c. Pass out a *Check This Out* card to each member of your group.

    d. Follow the instructions on your group's *Topic Card* introducing the subject and asking questions for your group to answer.

    e. You will have 15 minutes to share the information and become experts on the topic.

CHECK THIS OUT CONTINUED

3. After 15 minutes, groups form new teams. Each new team should include people from each of the topic groups.

4. Using poster or dry erase board, each team answers and illustrates the following question:

   Give 3 examples of how consumers create waste that ends up in the ocean and what you can do about it.

5. After 15 minutes, each team presents their answers to the entire group.

GENERATION EARTH

TOPIC CARD:
POLLUTION GOING DOWN THE DRAIN

READ THIS AS A GROUP

1

The rectangular openings or "catch basins" at the end of your street are more important than you may realize. Street gutters drain water off the streets through catch basins and storm drains. These openings lead to flood control channels that, in turn, carry the water directly to the ocean. With it goes everything that the water picks up as it travels through streets and into the ocean.

2

Each person reads his/her Check This Out card and takes notes (you will need them later!)

3

As a group, answer the following questions. Hint: Each team member has different information that will help.

think about it!

1. When it comes to rainfall, how do urban areas differ from natural areas? What causes stormwater runoff in urban areas?
2. What are some common trash items that end up in our stormwater runoff? Where do these pollutants come from?
3. Name three reasons it is important to us as students to prevent polluted stormwater runoff.
4. What can we do to encourage our classmates, friends, and neighbors to help reduce stormwater runoff pollution?

STUDENT PAGE

GENERATION EARTH

CHECK THIS OUT

POLLUTION GOING DOWN THE DRAIN

1

- In natural settings, rainwater hits the ground and seeps into the soil, helping to replenish underground water supplies.
- In urban environments, most rainfall never reaches the soil that is underneath paved surfaces. Instead, it hits our streets and runs across pavement, through gutters, and into storm drains. This water is called runoff.
- Storm drains help prevent urban flooding by carrying large volumes of urban runoff through concrete flood channels to the ocean. Water that enters storm drains on the streets is carried directly to the ocean. Many residents do not realize that water from Los Angeles goes straight to the ocean without treatment.

STUDENT PAGE

GENERATION EARTH

CHECK THIS OUT

POLLUTION GOING DOWN THE DRAIN

2

- Since many compounds and chemicals easily dissolve in water, urban runoff carries with it almost anything dumped into a gutter or storm drain. Urban runoff is a significant source of ocean pollution.
- Litter, dog excrement, cigarette butts, fast food packaging, plastic shopping bags, gum, leaking motor oil – anything on the ground – can end up washed into gutters and carried to the ocean.
- Pollution from urban runoff creates health risks for children, kills marine life, and causes beach closures. Beach cities discourage swimming after a storm because of elevated bacteria levels in the water.

STUDENT PAGE

GENERATION EARTH

CHECK THIS OUT

POLLUTION GOING DOWN THE DRAIN

3

- About 35% of the drivers in Los Angeles change their own motor oil. This used oil is often dumped.
- One gallon of used motor oil, poured into the gutter or dripped from a car, can potentially contaminate up to one million gallons of ocean water.
- About 306 million gallons of motor oil are sold in California each year. Of that, about 93 million gallons are collected and recycled each year. That means that just over 200 million gallons of motor oil are not being collected and recycled.
- There are over 635 Certified Collection Centers (CCCs) in Los Angeles County where collected motor oil is cleaned and re-refined for future use. Check with your city recycling coordinator for locations or go to www.ciwmb.ca.gov/usedoil/CrtCntrs.asp to put in your zip code for a CCC near you.

STUDENT PAGE

GENERATION EARTH

CHECK THIS OUT

POLLUTION GOING DOWN THE DRAIN

4

- Pesticides and fertilizers used on lawns or gardens, can be washed off plants and carried through storm drains to the ocean.
- Hosing down a driveway or sidewalk or washing a car in the street can send water contaminated with chemicals through storm drains to the ocean.

STUDENT PAGE

GENERATION EARTH

CHECK THIS OUT

POLLUTION GOING DOWN THE DRAIN

5

- Pesticides are toxic to many different life forms. In the ocean, they are often absorbed along with nutrients by plants. As marine plants are eaten by the food chain, chemicals accumulate in the fatty tissues of fish and other animals. This is called bioaccumulation. Animals, including humans that eat larger fish can be seriously affected by eating large doses of toxic chemicals.
- Humans also eat high on the food chain and can be harmed by eating foods containing large doses of toxic chemicals.
- Lawns and gardens can be grown and maintained without the use of chemical pesticides, even if insect predators are present. This is called organic gardening or farming.

STUDENT PAGE

GENERATION EARTH

TOPIC CARD: HAZARDOUS HAPPENINGS

READ THIS AS A GROUP

1

You may not think of your home as a storage place for dangerous products, but check the labels on the cans and bottles under the sink: all products labeled "corrosive," "flammable," "irritant," or "poison" contain hazardous compounds. Consumer electronics, including cell phones, computers and televisions, contain potentially harmful substances that can get into the environment. Hazardous wastes contain potentially toxic substances that can be harmful to human health or the environment, especially if not disposed of properly.

2

Each person reads his/her Check This Out card and takes notes (you will need them later!)

3

As a group, answer the following questions. Hint: Each team member has different information that will help.

think about it!

1. Why is it important to us as students to help keep hazardous materials out of Los Angeles landfills? Give at least three reasons.
2. How can we safely dispose of household hazardous wastes?
3. What effect does buying batteries or cleaning supplies have on the environment?
4. What can we do to encourage manufacturers to reduce the number of toxic household products they make?
5. How can we encourage our classmates, friends, and neighbors to help reduce the toxic substances being used at home or school?

STUDENT PAGE

GENERATION EARTH

CHECK THIS OUT

HAZARDOUS HAPPENINGS

1

- Only about 1% of household waste is estimated to be made up of hazardous compounds, but it has the greatest potential to pollute the environment through improper and often illegal disposal.
- Many common household products turn into hazardous wastes. Products like bathroom cleaners, batteries, bug spray, disinfectants, drain cleaners, empty aerosol cans, floor care products, glue, lighter fluid, moth balls, motor oil, nail polish remover, oven cleaners, oil-based paints, perfumes, rat poison, and window cleaners are all examples of hazardous waste.

STUDENT PAGE

GENERATION EARTH

CHECK THIS OUT

HAZARDOUS HAPPENINGS

2

- It is illegal to dispose of most hazardous wastes in a landfill or waste-to-energy facility, a place that turns garbage into electricity.
- If we throw hazardous materials into the trash at home or at school, they will most likely end up in landfills or at waste-to-energy facilities throughout Los Angeles County.
- Workers are sometimes hurt by unknowingly handling toxic materials that have been thrown into the trash.

STUDENT PAGE

GENERATION EARTH

CHECK THIS OUT

HAZARDOUS HAPPENINGS

3

- Chemicals from hazardous wastes do not easily degrade. Once in the environment, they last an extremely long time, continuing to be a serious health hazard.
- Once hazardous chemicals get into the water system – whether through the drain or the gutter– they can be taken up into plants through their roots. As the plants move their way up the food chain to larger and larger animals, the chemicals accumulate in a process called bio accumulation. As a result, animals high on the food chain can die from eating large doses of toxic chemicals.
- Humans eat high on the food chain and can be harmed by eating goods containing large concentrations of toxic chemicals.

STUDENT PAGE

GENERATION EARTH

CHECK THIS OUT

HAZARDOUS HAPPENINGS

4

- Electronics may contain lead, copper, and other heavy metals or potentially toxic substances. This makes it critical to reduce e-waste by only buying what you need, reusing electronics that still work, and recycling them at the end of their useful life cycle.
- The Household Hazardous Waste Collection Program in Los Angeles County is a good way to dispose of hazardous household products. Through the program, residents can bring many kinds of unwanted chemicals and electronics, free of charge, to roundup locations throughout the county or to one of the five permanent collection facilities for proper disposal. Call 1-888-CLEAN-LA for collection facility locations and event dates in your area.

STUDENT PAGE

GENERATION EARTH

CHECK THIS OUT

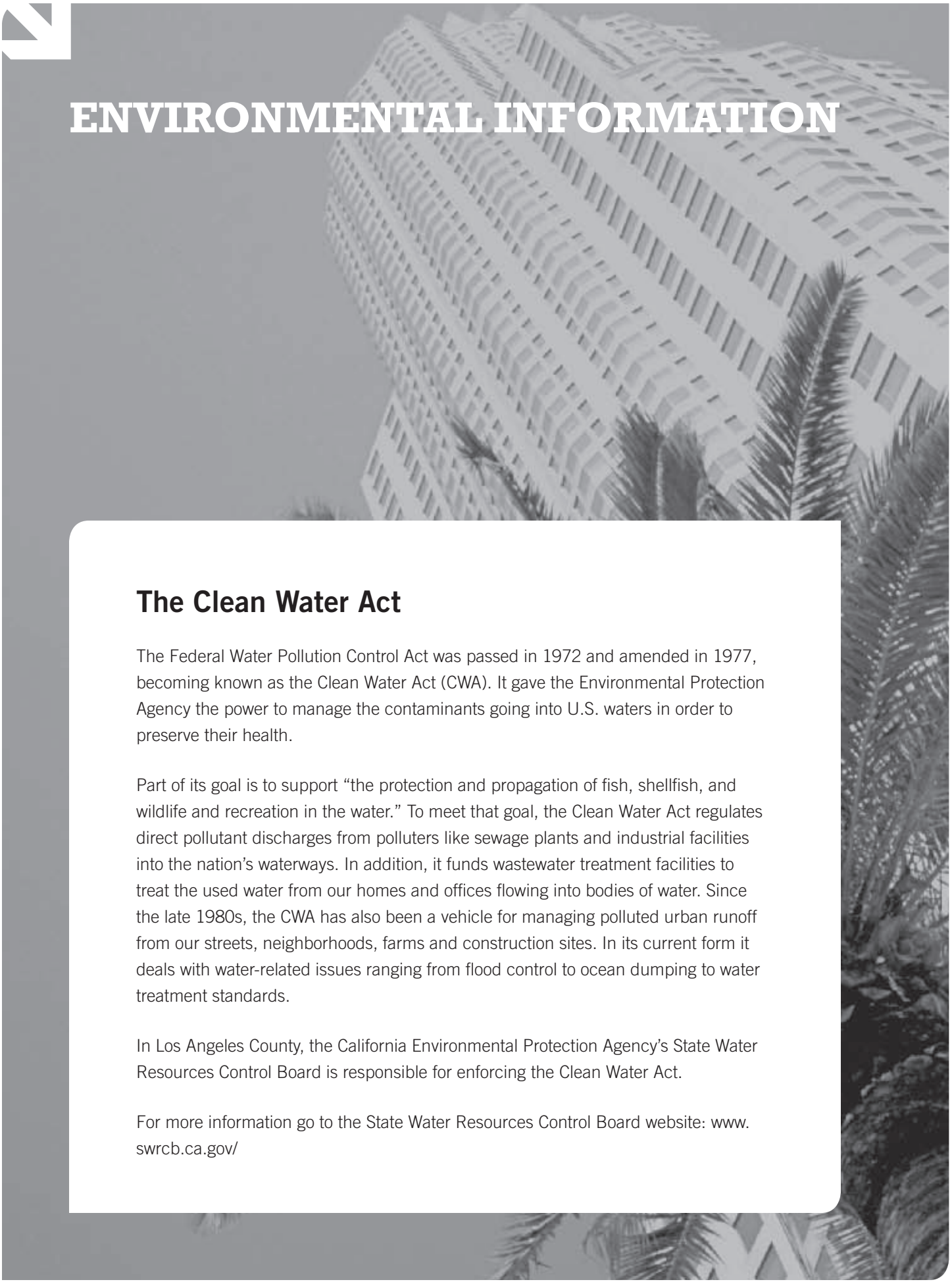
HAZARDOUS HAPPENINGS

5

- Hazardous materials are almost always labeled and include directions for proper disposal. Some must be taken to special collection sites designed for household hazardous materials.
- There are safe alternatives to many household hazardous materials. For instance, vinegar and baking soda can be used in place of window cleaners and cleansers.
- One of the best ways to avoid the dangers of household hazardous wastes is not to buy them in the first place.

STUDENT PAGE

ENVIRONMENTAL INFORMATION



The Clean Water Act

The Federal Water Pollution Control Act was passed in 1972 and amended in 1977, becoming known as the Clean Water Act (CWA). It gave the Environmental Protection Agency the power to manage the contaminants going into U.S. waters in order to preserve their health.

Part of its goal is to support "the protection and propagation of fish, shellfish, and wildlife and recreation in the water." To meet that goal, the Clean Water Act regulates direct pollutant discharges from polluters like sewage plants and industrial facilities into the nation's waterways. In addition, it funds wastewater treatment facilities to treat the used water from our homes and offices flowing into bodies of water. Since the late 1980s, the CWA has also been a vehicle for managing polluted urban runoff from our streets, neighborhoods, farms and construction sites. In its current form it deals with water-related issues ranging from flood control to ocean dumping to water treatment standards.

In Los Angeles County, the California Environmental Protection Agency's State Water Resources Control Board is responsible for enforcing the Clean Water Act.

For more information go to the State Water Resources Control Board website: www.swrcb.ca.gov/

ENVIRONMENTAL INFORMATION

sample career questions to ask

1. What are classes in the environmental field that your college offers?
2. What field of study or major do these classes support?
3. What careers do students go into that are in this field of study?
4. What is the minimum schooling required? (example: Bachelor's Degree)
5. What is the recommended schooling? (example: Master's Degree)
6. Do you need any certification or credential?
7. What coursework is necessary while in high school?
8. What is the starting salary in this field?
9. What is the average salary in this field?
10. What personal skills are necessary for this field?
11. What is the work environment (indoor/outdoor, one location/multiple locations)?
12. Who do you work for in this field (government, private, nonprofit, etc.)?
13. What is the outlook for this field (growing, steady, etc.)?
14. Describe some of the job duties related to this field.

ENVIRONMENTAL INFORMATION

CONTINUED

organizations that offer volunteer opportunities for youth

BALLONA WETLANDS LAND TRUST
Playa Del Rey
(310) 264-9468
www.ballona.org/f-youdo.asp

Community clean up and restoration of Ballona Wetlands

FRIENDS OF THE LOS ANGELES RIVER
570 W. Ave 26 #250
Los Angeles, CA 90065
(323) 223-0585
1-800-LA RIVER

River clean up events
Volunteer opportunities

AMIGOS DE BOLSA CHICA
PO Box 1563
Huntington Beach, CA 92647
(714) 840-1575
www.amigosdebolsachica.org

Clean up events of Bolsa Chica Wetlands

FRIENDS OF BALLONA WETLANDS
(310) 306-5994

Wetlands and dune restoration work

HEAL THE BAY
1444 9th St.
Santa Monica, CA 90401
(310) 451-1500 (800) HEAL BAY
info@healthebay.org

Adopt-a-Beach program

SURFRIDER FOUNDATION
www.surfrider.org

Beach clean-ups and water testing

TREEPEOPLE
12601 Mulholland Drive
Beverly Hills, CA 90210
(818) 753-4600
volunteer@treepeople.org

Southern California gardening and rain garden web sites

www.nricd.org/plantraingarden.htm

www.lid-stormwater.net/bioretention/biolowres_home.htm

www.raingardennetwork.com/about.htm

www.bewaterwise.com/

working with children

The best way to learn about a particular subject is to teach it to others. Working with younger children is not only an ideal way to learn and teach about water quality issues, but it can also be very rewarding.

One example of a project involved older students who had learned about the issue of water quality after conducting a water flow scavenger hunt on their campus. After learning more about the issue of stormwater pollution and the harm it causes, students decided to create posters and a 10 minute traveling presentation. They made arrangements with teachers at the local elementary school to do their presentations on Earth Day. Teams of two went from classroom to classroom giving their presentations and emphasizing what students could do at their school to keep trash from getting into the local waterway.

SOURCES FOR GROUPS OF CHILDREN

ELEMENTARY SCHOOLS – talk with the Principal

BROWNIE GIRL SCOUT TROOPS – talk with the local Girl Scout Council for names of Troop Leaders in your area

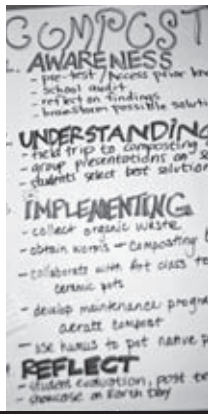
AFTER-SCHOOL PROGRAMS – talk with Program Directors

CAMPS – talk with Camp Directors

HELPFUL HINTS

- Make sure activities and discussions are appropriate for the attention span of the participants. Check with the supervising adults to make sure your program is age-appropriate.
- Include hands-on activities. Children prefer to be actively involved in the learning experience.
- Use demonstrations and other active or visual instructions when showing how to do tasks.
- Be patient. It may take time for children to understand and get engaged in your program.
- Be an active participant and have fun!

SERVICE PROJECT IDEA MAPPING ACTIVITY



TIME **45 MINUTES**

OVERVIEW

After thinking about what has been learned about stormwater urban runoff, teams develop ideas for a project by creating a poster and using the Project Map as your guide. These teams present their ideas, and looking at the resources, materials, time, and impact to the community, the entire group assesses and chooses which service project they want to do.

materials

- ☐ Poster paper – 1 per group
- ☐ Markers – 1 set per group
- ☐ Project Map – 1 per group
- ☐ Idea Web – 1 per group

procedure

1. Break up into working teams.

2. Each team gets a Project Map and an Idea Web (shows the layout of the poster).

3. Follow the map and create an idea for a project by illustrating it on poster paper to present to the entire group.

    a. Project Idea – What ideas do you have for a project that will improve or eliminate the issue of waste? State this in the center circle.

    b. Project Goal – This is the goal describing what you want to achieve. A measurable goal is easiest to assess. List this at the bottom of your poster.

    c. Human Resources – These are your resources. Who can help you to achieve your goal – community organizations, agencies, your principal? List these in the top right circle.

    d. Supplies and Materials – These are the materials necessary to complete the project. Do any cost money or can they be donated? List these in the bottom right circle.

SERVICE PROJECT IDEA MAPPING ACTIVITY

procedure continued

e. Timeline – This is an estimated timeline. How much time will it take to accomplish and how much time do you have to complete it? Is it a one day or one month project? List this in the top left circle.

f. The Bigger Picture – This lists the greater impact to the community and the environment. What significance will your project have? List this in the bottom left circle.

4. Once complete, each team presents its ideas to the entire group.

5. As a group, looking at the resources, materials, time, and impact to the community, assess and choose which project seems most practical and most exciting to you.

SERVICE PROJECT MAP

GENERATION EARTH

1 Target the Issue

What are some concerns on your campus/in your community?

WASTE REDUCTION
After nutrition/lunch, is there trash on the ground?

RECYCLING
Is there an unsuccessful recycling program at your school?

CAMPUS FLOODING
Does your campus flood when it rains?

WATERSHED PROTECTION
Are there pollutants/trash in the river/beach near your school?

ILLEGAL DUMPING
Are there items (couches, etc.) that are dumped illegally near your school?

List the environmental issue at the top of your poster.

2 Project Idea

What are you going to do about it?

Some examples include:

WASTE REDUCTION
Idea: Conduct a waste reduction campaign.

RECYCLING
Idea: Set up a classroom recycling contest.

CAMPUS FLOODING
Idea: Plant trees and/or a native plant garden.

WATERSHED PROTECTION
Idea: Conduct an e-waste collection campaign.

ILLEGAL DUMPING
Idea: Conduct a community-wide education and clean-up project.

Place your project idea in the center circle of your project poster.

3 Project Goal

What do you hope to acheive?

EXAMPLE:
We will reduce waste on campus by 50% – half the number of dumpsters filled each trash pickup.

Write your goal at the bottom of your project poster.

4 Human Resources

Who are the people and/or organizations that can help you achieve your goal?

EXAMPLE:
Principal • Community members
Government Agencies • Advisor
Family/friends • Students
Environmental Organizations

Write your resources in the upper right circle of your project poster.

5 Supplies/ Materials

What do you need?

Do they cost money? Can some be donated or do you need to raise money?

Write out what you need and how you can get them in the lower right circle of your project poster.

6 Timeline

When does your project need to be completed?

EXAMPLE:
It needs to be completed by Earth Day – we have one month.

Write your timeline in the upper left circle of your project poster.

7 The Bigger Picture

What significance will this project have on you, your community and the environment?

EXAMPLE:
Us: It will reduce the amount of trash we see on campus.

Community: It will provide extra money for the school from recycling paper and bottles.

Environment: It will cut down on the amount of waste going to landfills and save natural resources.

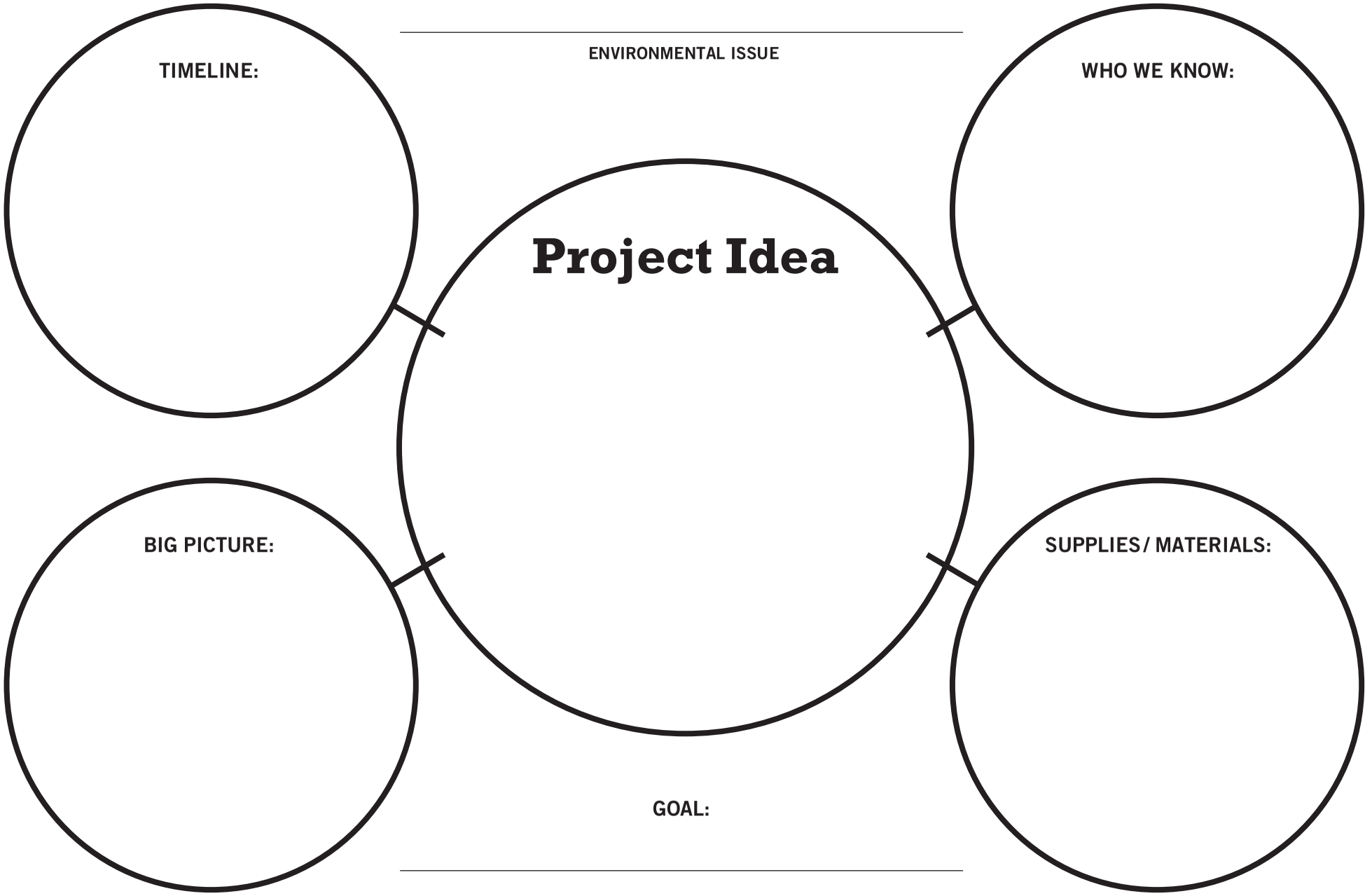
Write your Big Picture in the lower left circle of your project poster.

8

CONGRATULATIONS!

You've made it! You now have an idea to present!

IDEA WEB


TIMELINE:
ENVIRONMENTAL ISSUE
WHO WE KNOW:
Project Idea
BIG PICTURE:
SUPPLIES/ MATERIALS:
GOAL:

FROM THE STREETS TO THE SEA

FINAL REPORT

GENERAL INFORMATION

Contact Name _____

Phone number _____ Email address _____

Group name _____

Group type ☐ Club ☐ Troop ☐ Class ☐ Individual

Mailing Address _____

_____

REQUIREMENTS Check which activity you've completed

Explore the Issue ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6

Comments

_____

Link to Technology ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Comments

_____

Career Path ☐ 1 ☐ 2 ☐ 3 ☐ 4

Comments

_____

Service Project ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Describe in detail the service project you've completed _____

_____

_____

_____

_____

What values, opinions, or decisions have you made or changed through this experience?

How effective was the project in lessening your or your community's impact on the environment?

RECOGNITION

Recognition Choice ☐ Earth Tag ☐ Patch

Recognition items and Certificates of Completion will be sent or delivered to the given address.

Name of participants (print clearly) _____

_____

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Teacher/Advisor name (print) _____ Date _____

Teacher/Advisor signature _____

GENERATION EARTH

AN ENVIRONMENTAL EDUCATION PROGRAM

OF THE COUNTY OF LOS ANGELES,
DEPARTMENT OF PUBLIC WORKS

presented by TreePeople

PRODUCT GROUP FROM WELL-MANAGED FORESTS AND OTHER CONTROLLED SOURCES

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